REMARKS

Claims 31 and 32 are independent and stand rejected under 35 U.S.C. § 102 as being anticipated by Downey '670 ("Downey"). This rejection is respectfully traversed for the following reasons.

Each of claims 31 and 32 embody irradiating a ***plasma*** to a substrate. In direct contrast, the relied on portion of Downey discloses only irradiating ***ions*** from a plasma to a substrate. Specifically, Downey expressly discloses "plasma 140 contains positive ions of the ionizable gas from gas source 136 and includes a plasma sheath ... ions from plasma 140 [move] across the plasma sheath toward platen 114 [and the] accelerated ions are implanted into wafer 120" (paragraph 29). That is, the plasma 140 of Downey is not irradiated to the substrate. Rather, ions contained in the plasma 140 are irradiated to the substrate. Indeed, the plasma 140 of Downey is ***bounded*** by a plasma sheath. In sum, the present invention embodies forming an amorphous layer by utilizing He-plasma, whereas Downey merely discloses plasma doping in which ions from the plasma 140 are implanted to the substrate.

With respect to the § 103 rejection over Downey in view of Thibaut '051 ("Thibaut"), it is respectfully submitted that Thibaut is not prior art *for purposes of § 103* as it is commonly owned and valid (in terms of date) *only* under § 102(e). It is respectfully submitted that Thibaut and the present application were commonly owned "at the time the invention was made." In this regard, it is noted that the Inventor, Assignee, etc., information on the front page of Thibaut is incorrect (the Examiner is directed to PAIR, in which the Declaration, Assignment papers, etc., of Thibaut are shown). Accordingly, it is respectfully requested that the § 103 rejection which relies on Thibaut be withdrawn for at least the reason that Thibaut is disqualified as prior art pursuant to MPEP § 706.02(l)(1-2). As the § 103 is necessarily withdrawn for the above reasons, it is respectfully submitted that any potential new ground of rejection would not be

necessitated by the enclosed amendment, so that any corresponding Office Action must be made non-final.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently (noting that "inherency may not be established by probabilities or possibilities", *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)), in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that the cited prior art does not anticipate claims 31 and 32, nor any claim dependent thereon. The Examiner is directed to MPEP § 2143.03 under the section entitled "All Claim Limitations Must Be Taught or Suggested", which sets forth the applicable standard for establishing obviousness under § 103:

> To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)).

In the instant case, the pending rejections do not "establish *prima facie* obviousness of [the] claimed invention" as recited in claims 31-32 because the cited prior art fails the "all the claim limitations" standard required under § 103.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 31-32 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. § 102/103 be withdrawn.

CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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